

Device Search Protocol (B Series Ipcamera)

1. Introduction

With this protocol, you can search and change the network configuration of ipcameras with intranet.

Procedure: PC client broadcasts search packages over intranet via port 10000. Whenever the ipcamera receives the packages, it broadcasts the response packages in return via the original port which it gets the search packages.

Configuration: PC client broadcasts search packages over intranet via port 10000. Whenever the ipcamera receives the packages, it checks whether it's the proper target, when the check result is true, it makes configuration accordingly and returns the operation result to the original port which it gets the search packages..

The above operations are based on UDP protocol.

2. Data Type Definition

Data Type	length (unit: Byte)	Sort
INT8	1	
INT16	2	low byte leads, high byte follows
INT16_R	2	low byte follows, high byte leads
INT32	4	low byte leads, high byte follows
INT32_R	4	low byte follows, high byte leads
BINARY_STREAM	N	

3. Command Format

All protocols are combined by multiple commands. Every

command has its own format:

Combination	Type	Description
Header	BINARY_STREAM[4]	Camera operation protocol: "MO_I"
Operation Code	INT16	use to differentiate commands within a protocol
Reserved	INT8	=0
Reserved	BINARY_STREAM[8]	
Text Length	INT32	text length within the commands
Reserved	INT32	
Text	BINARY_STREAM[n]	text of the command

4. Detailed Command

4.1 Search_Req (Search Command)

- 1) Administration user broadcasts this command to the network, with which can collect the basic information of all cameras connected to the intranet.
- 2) Operation Code: 0
- 3) Command forth : administration user -> broadcast address (255.255.255.255, port 10000)
- 4) text field:

Field	Type	Description
Reserved	INT8	=0
Reserved	INT8	=0
Reserved	INT8	=0
Reserved	INT8	=1

4.2 Search_Resp (Search Responds Command)

- 1) Whenever a camera receives the command Search_Req, it responses with its network configuration and product information and broadcast to the network.
- 2) Operation Code: 1
- 3) Command forth : camera -> broadcast address (255.255.255.255 , same port it receives the Search_Req command)
- 4) Text field:

Field	Type	Description
Camera ID	BINARY_STREAM[13]	
Camera Name	BINARY_STREAM[21]	
IP	INT32_R	
Subnet mask	INT32_R	
Gateway IP	INT32_R	
DNS	INT32_R	
Reserved	BINARY_STREAM[4]	
Sys_software version	BINARY_STREAM[4]	a.b.c.d
App_software version	BINARY_STREAM[4]	a.b.c.d
Camera port	INT16_R	
dhcp enabled	INT8	0 : dhcp disabled ; 1 : dhcp enabled Note: this field is only valid for firmware later than x.x.2.2

4.3 Init_Req (Network Setting Initiation Command)

- 1) With broadcasting this command, user can initiate the network settings for cameras.
- 2) Operation Code: 2
- 3) Command forth : administration user -> broadcast address (255.255.255.255, port 10000)
- 4) text field:

Field	Type	Description
Reserved	INT8	=0
Reserved	INT8	=0
Reserved	INT8	=0
Reserved	INT8	=1
Camera ID	BINARY_STREAM[13]	
User	BINARY_STREAM[13]	
Password	BINARY_STREAM[13]	
IP	INT32_R	
Subnet mask	INT32_R	
Gateway IP	INT32_R	
DNS	INT32_R	
Camera Port	INT16_R	

4.4 Init_Resp (Response Command for Network Setting Initiation)

- 1) Whenever a camera receives the command Init_Req, it verifies the ID within the command. If the verification returns true, the camera make configuration accordingly and responses to the network with this command.
- 2) Operation Code: 3
- 3) Command forth : camera -> broadcast address (255.255.255.255 , same port it receives the Init_Req command)
- 4) Text Field:

Field	Type	Description
Setting Result	INT16	0: success
		1: user error
		5 pwd err
		6 pri err